



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/681,920	06/26/2001	Richard Charles Gaus JR.	RD-25376	8295

6147 7590 01/22/2004

GENERAL ELECTRIC COMPANY
GLOBAL RESEARCH CENTER
PATENT DOCKET RM. 4A59
PO BOX 8, BLDG. K-1 ROSS
NISKAYUNA, NY 12309

EXAMINER

NGUYEN, PHUNG

ART UNIT	PAPER NUMBER
----------	--------------

2632

DATE MAILED: 01/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/681,920

Applicant(s)

GAUS ET AL.

Examiner

Phung T Nguyen

Art Unit

2632

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 7-11, 14, 15, 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ouellette et al. [U.S. Pat. 5,933,092] in view of Hershey et al. [U.S. Pat. 5,519,692]

Regarding claim 1: Ouellette et al. disclose a method and apparatus for performing the register functions for a plurality of metering devices at a common node comprising a master controller 18 (figure 1, col. 7, lines 8-11) connected to the power line for transmitting a signal; a boundary component in the form of meter 16 (col. 6, lines 64-67) connected to the power line; Ouellette et al. do not disclose a GHM addressable device connected to the power line, the GHM addressable device defining a boundary of a network region based on the GHM signals transmitted over the power line. Hershey et al. teach a geometric harmonic modulation (GHM) communication system including an address to identify the recipient or originator of transmitted data (col. 2, lines 45-50, and col. 5, lines 26-46). In view of the teachings of Ouellette et al. and Hershey et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the technique of Hershey et al. in the system of Ouellette et al. in order to identify a device on a Local Area Network.

Regarding claim 2: Ouellette et al. disclose the master controller 18 comprising a transmitter for transmitting the signals on the power line (col. 3, lines 2-8). The GHM is already addressed in claim 1 above.

Regarding claim 7: Ouellette et al. disclose a local controller in the form of node 22 (col. 7, lines 15-20) connected to the power line, the local controller comprises a receiver and a transmitter for receiving and transmitting signals over the power line (col. 7, lines 22-27, and col. 9, lines 18-22).

Regarding claim 8: Ouellette et al. disclose the local controller comprises a first modem and the master controller comprises a second modem (col. 9, lines 14-22).

Regarding claim 9: Ouellette et al. disclose the local controller comprises a first RF link and the master controller comprises a second RF link (col. 7, lines 8-11, and col. 9, lines 20-22).

Regarding claim 10: Ouellette et al. disclose a plurality of meters 16 (figure 1, col. 7, lines 1-4) coupled to the power line.

Regarding claim 11: Ouellette et al. disclose the steps of transmitting a signal, receiving the signal, interpreting the signal; and establishing a network region in the reconfigurable network based on the step of interpreting the signal (col. 14 lines 14-32), plus the consideration of claim 1 above.

Regarding claim 14: All the claimed subject matter is already discussed in respect to claims 1, 7, and 11 above.

Regarding claim 15: Ouellette et al. disclose the master controller in the form of station 18 (col. 7, lines 8-11) for collecting data for meter 16. It is inherently seen that the master controller including the transmitter and the receiver.

Regarding claim 20: Refer to claim 10 above.

Regarding claim 21: Ouellette et al. teach the known concept of transmitting commands and data on the power line (col. 5, lines 28-46) except for determining if a dotting portion is present in the signal. Hershey et al. teach the dot product unit 79 (figure 2, col. 5, lines 26-46. and col. 7, lines 35-38) for making a data bit decisions. In view of the teachings of Ouellette et al. and Hershey et al., it would have been obvious to the skilled artisan to combine the teachings of Hershey et al. and Ouellette et al. so that there is less possibility of loss of communications due to interference.

Regarding claim 22: Refer to claim 1 above.

Regarding claim 23: Ouellette et al. disclose a local controller 22 (figure 1, col. 7, lines 15-20).

Regarding claim 24: Ouellette et al. disclose a network region in the reconfigurable network based on the step of executing the command portion (col. 6, lines 5-14).

Regarding claim 25: Hershey et al. disclose the signal comprising a GHM signal (col. 2, lines 45-51).

3. Claims 3, 4, 12, and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ouellette et al. in view of Hershey et al. and further in view of Payne [U.S. Pat. 6,040,769]

Regarding claims 3 and 4: Ouellette et al. disclose the microprocessor connected to the receiver (col. 7, lines 62-64). The combination does not show a capacitor bank and an impedance connected in series with the capacitor bank as claimed. However, it would be obvious to use the capacitor bank to regulate the voltage on the lines to prevent under voltage and over voltage

Art Unit: 2632

conditions; and using the impedance as a switching device is old and well known in the art as taught by Payne, col. 4, lines 54-56, and col. 5, lines 1-9). Therefore, it would have been obvious to the skilled artisan to use the technique of Payne into the system of Ouellette et al. and Hershey et al. in order to selectively switch in and out of the reconfigurable network if desired.

Regarding claim 12: Refer to claims 3 and 4 above.

Regarding claims 16 and 17: Refer to claims 3 and 4 above.

4. Claims 5, 6, 13, and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ouellette et al. in view of Hershey et al. and Payne and further in view of Rickard et al. [U.S. Pat. 5,977,650]

Regarding claims 5 and 6: All the claimed subject matter is already discussed in respect to claims 3 and 4 above except the boundary component comprising an underground cable. However, Rickard et al. disclose a transmitting communication signals over a power line network comprising the network which can comprise underground or overhead lines or a combination of these (col. 3, lines 59-60). Therefore, it would have been obvious to the skilled artisan to use the teaching of Rickard et al. into the system of the combination because extending the use of the device would be an advantage.

Regarding claim 13: Refer to claims 5 and 6 above.

Regarding claims 18 and 19: Refer to claims 5 and 6 above.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phung T Nguyen whose telephone number is 703-308-6252. The

Art Unit: 2632

examiner can normally be reached on 8:00am-5:30pm Mon thru. Friday, with alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J. Wu can be reached on 703-308-6730. The fax numbers for the organization where this application or proceeding is assigned are 703-305-3988 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.

Examiner: Phung Nguyen

A handwritten signature in black ink, appearing to read 'Phung Nguyen', with a long horizontal stroke extending to the right.

Date: January 21, 2004